

ABSTRACT

Complex layout features, especially two-dimensional (2D) features such as jogs and corners, are more susceptible to photo-resist pinching and bridging, even with the use of optical proximity correction. These problems may arise due to unrealistic targets, e.g. square corners, thereby resulting in excessively aggressive correction in the vicinity of these 2D features. To provide a more realistic target, an aerial image can be sampled and its gradient computed at evaluation points on the 2D feature. The aerial image contains spatial information about the local pattern and the interaction of the pattern with the manufacturing process. This information can be used to predict a feasible shape or curvature for the 2D feature. The predicted shape can then be used to retarget the 2D feature based on realistic process capabilities.